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ABSTRACT

Trends affecting higher education in Australia, issues relating to selection and admission, and difficulties that many students face during their first year in college are discussed. Declining enrollment trends and an over-supply of graduates in a number of fields, especially some science fields, are discussed. A shift of emphasis away from heavily vocational courses is predicted. Problems with the use of the high school certificate as a selection criterion, the need for deferred entry schemes to allow students to identify their interests, attitudes of young people toward higher education, and the interest of older people in gaining access to higher education are discussed. A consequence of the poor quality and quantity of information available to applicants prior to entry to college is the unrealistic character of the aspirations and expectations of many first-year students. Many students appear to be unable to make a psychologically smooth transition from high school to university or to cope with the continuing demands of advanced study. Recommendations are offered to improve some of the identified problems. (SW)

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TERTIARY SHOCK:
FROM SCHOOLING TO HIGHER EDUCATION.

The pace of social change in Australia exceeds our capacity to make intelligent plans for coping with its consequences. This is undeniably true of education and is reflected in the grotesquely inadequate quality of the public discussion of educational policy. This paper[1] is intended as a modest contribution towards raising the level of the debate by drawing attention to some of the factors which will inevitably bring about major changes in our schools and tertiary institutions so that we can prepare to plan for change rather than simply be overtaken by events. Later, I shall focus upon some issues relating to selection and admission and the difficulties which many students face during their first year at university, but first I shall sketch on a larger canvas so that these problems may be considered within a broader context of changing social and educational conditions.

The Demand for Higher Education

The Borrie Report[2] on population trends shows clearly that the growth in the size of the tertiary education client population is already slowing very rapidly and will begin to decrease in absolute numbers in the early 1990's. This decreasing growth needs to be viewed against the background of a very rapid rate of growth in tertiary enrolments in recent years:

1951:	27,000
1961:	57,000
1971:	123,000
1975:	148,000

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[1] An earlier version of this paper was presented to a symposium on "School to University Transition" at the University of Wollongong, June 4th., 1976.

[2] National Population Inquiry, First Report (1975) Population and Australia, A Demographic Analysis and Projection. 2 vols. Parliamentary Paper No. 6, Canberra: Australian Government Publishing Service.

It is important to realise that the maximum size of the eighteen year-old cohort in the early 1990's is already determined and that nothing can alter this: more important for our purposes is the fact that it is significantly smaller than the 1976 cohort. But the size of the client population for tertiary education may also be further reduced by other factors such as the holding power of high schools: this has already begun to flatten out and in Victoria there is evidence of a slight decline in the total number of those who are staying on at school in order to take the Higher School Certificate, thus decreasing the number of school-leavers available for entry to higher education.

There is already an over-supply of graduates in a number of fields, especially many of those with a science base. In Victoria, for example, from 1969 to 1973 there was a 38% increase in the number of graduates and a 165% increase in science graduates. Until now the effects of this over-supply have been cushioned by the capacity of the education system itself to absorb graduates: about 30% have been taken back into the system. But, with a greatly reduced growth rate, this cannot continue on anything like the same scale. The demand for teachers is expected to be fully satisfied within five years - even for teachers of mathematics and English. This means that we are fast approaching a situation in which about one third of all graduates will either be unemployed or forced to take up work which is inappropriate to their qualifications. This is already a major problem in Britain and the USA. A few months ago 20,000 student teachers in Britain demonstrated against further reductions in the intake for teacher training courses and the imminent closure of some thirty colleges of education. At the end of this year it has been predicted that of the 40,000 new teachers who will qualify in Britain about 15,000 will be unable to obtain jobs. In Australia the government has now prohibited any further growth in the number of places for student teachers, and this will inevitably soon be followed by a reduction in the numbers allowed to enrol in training courses.

Note: For some of the material in this section on supply and demand I am indebted to an unpublished paper by L. West and T. Hore, "Factors influencing tertiary education."

It seems likely that the reduction of job opportunities will lessen the attractiveness of higher education for school leavers and so further reduce the absolute number likely to be seeking a place. Some Faculties are already experiencing difficulties in filling their quota. In 1974 the Victorian tertiary education system was left with about 3,000 vacant places and there are almost certainly more this year. The response to this has been to lower entry standards but this obviously cannot be a long term solution.

We can also predict a shift of emphasis away from heavily vocational courses: this is already evident in the course choices of mature students. Advanced study may increasingly be viewed as something valuable in itself, a consumer good, rather than a stepping stone to specialized employment opportunities. There is also likely to be a marked increase in demand for higher education from adults who will be seeking both education for its own sake and re-training in vocational skills. This will involve major changes in curricula, teaching methods and enrolment patterns.

The situation is further complicated by unpredictable changes in the employment situation, variations in the interests and aspirations of young people, and by developments within the school system as it attempts to free itself from constraints imposed by the admission requirements of the tertiary sector. Finally, there is the question of the funding of higher education: during the past twenty years this has been made available on a very generous scale but there are already clear signs that this expansionary period has come to an end and it may be that, in absolute terms, the amount of funds available to tertiary education will be reduced.

Selection

The present situation is one of unprecedented flux and a number of major changes are already taking place within Australia as well as in many other countries. Few would deny that changes within New South Wales are long overdue since many features of the present system are widely recognised as being socially and educationally undesirable. The use of Higher School Certificate aggregates as the

sole criterion for selection is quite indefensible given the poor correlation between these and final degree performance.[1] Their use may also be producing socially skewed entry into certain faculties: in Medicine, for example, an applicant must obtain a score within the top 2% of H.S.C. marks in the State to have any chance of securing a place and we know that there is a great deal of evidence to suggest that performance in such examinations is quite strongly related to social class characteristics.[2] Many correlational studies of the relationship between school and university performance have also shown that too many other factors intervene for examinations such as the H.S.C. to be relied upon as an adequate predictor.[3]

The use of H.S.C. results as a selection criterion has also placed severe restraints upon the schools in their efforts to provide a meaningful education for the majority of pupils who do not proceed to higher education. High school teachers in Victoria have already indicated, for this reason, that they are unwilling to continue to support the use of H.S.C. for selection purposes.

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[1] B. Choppin and Patricia Fara (1972) Admission to Higher Education: A Select Annotated Bibliography. Windsor: National Foundation for Educational Research; S. Lofthouse (1974) "Methods of selecting students for degree courses: a discussion." Durham Research Review, No.32, 887-902. Winn McDonell (1975) Testing for Student Selection at Tertiary Level: A Literature Review. Melbourne: Australian Council for Educational Research; G. W. Miller (1970) Success, Failure and Wastage in Higher Education. London: Harrap.

[2] Australian Vice-Chancellors' Committee (1971) The 1961 Study. Canberra: Australian Government Publishing Service.

[3] Correlation coefficients between end-of-school and university first-year performance range between 0.30 and 0.50. That is, performance in H.S.C. explains, at best, only about 25% of the variance in first-year performance. A recent study has shown that if the lowest 25% of H.S.C. scorers is removed the pass rate only rises from 56% to 59%: L. West and R. Slamowicz (1976) "Drop out and performance of Engineering students". Unpublished report. Melbourne: HEARU, Monash University.

School-leavers are also faced with very serious problems in attempting to make decisions relating to their applications for a place in a tertiary institution and in determining whether or not to accept a place when it is offered.[1] Reliance upon H.S.C. results as a selection criterion severely limits the time available to them in which to decide between several offers and such decisions must, of necessity, be made in a crisis atmosphere, sometimes only a few days before the academic year begins. They also lack access to adequate information and advice as to what subjects are appropriate to their aptitudes and aspirations, and which institutions will best meet their requirements for personal and intellectual development. Someone pointed out recently that computers are often allowed more time in which to print-out offers of places than applicants are allowed to decide which offer to accept.

Many school-leavers are uncertain about their vocational interests and intellectual aptitudes, a fact borne out by the continuing high failure and drop-out rate in first-year courses. It seems sensible, therefore, to encourage them to defer entry so that they have an opportunity to try themselves out in the world of work and have time to form a clearer idea of where their real interests lie before committing themselves to three or four years of study. A number of Australian universities already have deferred entry schemes but little attempt is made to encourage students to make use of them and many of those who do so subsequently decide not to take up the offer which was originally made to them.[2] In Sweden, Norway and Germany schemes are being introduced which encourage deferred entry and give preference to applicants with work experience. If there is an excess of demand over places available then a ballotting system is used: given the poor correlation between end-of-school examinations and degree performance pulling names from a hat is as

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[1] See F. M. Katz et al. (1975) Alternative Admission Systems for Tertiary Institutions in N.S.W. and the A.C.T. Sydney: Tertiary Education Research Centre, University of New South Wales.

[2] Since 1971, at the University of N.S.W., approximately 25% of those students offered deferred entry have returned to enrol in the deferred course in the following year.

rational a selection procedure as any other currently in use -- except for the high-flyers. But there is already within Australia an excess of supply over demand: many institutions in 1976 had to make several rounds of offers in an attempt to fill vacant places so it may be that the problem of selection is fast disappearing of its own accord. As one British commentator recently said of the use of examinations as a selection device:

> When on either side of the school leaving age insufficient attention is given to the relationship of work in schools and post-school education; when increasing numbers of students enter post-school education without formal qualifications; when as a predictor of later success they are unreliable; it becomes increasingly difficult to see why examinations are used at all as a measure of acceptability for post-school education.[1]

Another factor contributing to current instabilities in admission and enrolment patterns is the changing attitude of many young people towards higher education: for an increasing number of them the decision to undertake advanced study is no longer the once-for-all affair that many observers have supposed it to be. The 'revolving door'[2] syndrome has become a much more widespread phenomenon as students drop-in and drop-out of the system in order to satisfy personal needs and fluctuating career plans. The extent of this has been revealed by Beswick's[3] follow-up study of 5,000 school-leavers who matriculated in 1973. Fifty percent of this group said that they would prefer to defer entry to higher education for at least a year after completing H.S.C. and in 1975 about 30% of those who had in fact taken a year off from studying had entered the tertiary system. Of those who claimed a definite intention to defer enrolment some 60% had enrolled in 1975.

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[1] J. Pratt (1975) "School and after". Higher Education Review, 8, No. 1, 71-79, p. 79.

[2] R. G. Cope and W. Hannah (1976) Revolving College Doors - The Causes and Consequences of Dropping out, Stopping out and Transferring. New York: Wiley.

[3] D. G. Beswick (1976) "A progress report on a longitudinal study of vocational and educational development of 5,000 matriculation students." Paper presented to the 47th ANZAAS Congress, Hobart.

Finally, there is the increasing interest of older people in gaining access to higher education either to further their own intellectual development or to qualify themselves for another career. There can be little doubt that this trend will become more pronounced over the next decade; there can also be no doubt about the desirability of encouraging it. One of the few claims that can be made with some confidence about the prediction of academic success is that it is strongly associated with the motivation of students and their having a clear idea about what they want to study and why they wish to study it. Older students tend to be both highly motivated and possessed of a well-developed conception of their aims and interests. Recent studies[1] at the University of N.S.W. have shown that the academic performance of mature students, even when they fail to meet the normal matriculation requirements on entry, is notably superior to that of students entering straight from school. Studies elsewhere[2] have shown that few students fail or drop-out because they are deficient in intellectual capacity: other factors play a much more important part in determining the likelihood of academic success.

Student Aspirations and Expectations on Entry.

One consequence of the poor quantity and quality of information available to applicants prior to entry is the unrealistic character of the aspirations and expectations of many first-year students. This has been documented in a recent study by Wieneke[3] of students at the University of N.S.W. In both 1969 and 1974 about 40% of entering students said that they anticipated that they would take an honours degree whereas as in fact only about 15% proceeded to honours. Twenty-seven

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1 Eve Barrett (1976) "A special admissions scheme - mature age unmatriculated students at the University of New South Wales in 1975". Paper presented to the 47th ANZAAS Congress, Hobart.

2 J. A. Wankowski and J. B. Cox (1973) Temperament, Motivation and Academic Achievement. Birmingham: Educational Survey and Counselling Unit, University of Birmingham.

3 Christine Wieneke (1976) Students Entering the University of N.S.W. in 1975: Attitudes, Expectations and Aspirations. Monograph No. 9. Sydney: Tertiary Education Research Centre, University of N.S.W.

percent also said that they intended to study later for a higher degree whereas only 12% actually do so. Most of them expected their courses to be intellectually stimulating although a rather alarmingly high proportion (12%) said that they did not expect this to be the case. Perhaps they had not been able to enter the Faculty of first choice, or had only entered the University because of parental pressure or through the absence of any more desirable alternative course of action. A more depressing explanation is that other students had told them that many courses are rather boring.

Ninety-three percent, however, said that they expected to enjoy life at the University and about 50% did not anticipate any difficulty in coping with advanced study and in achieving success in the examinations. Unfortunately, there are good reasons for supposing that many of these expectations are unlikely to be matched by the realities of university life.

Adjustment Difficulties.

Of the students who entered the University of N.S.W. in 1969 about 78% said that they were aiming to obtain a credit or better in all of their courses, but at the end of that year only 49% of the intake passed all their subjects in first year and of all students enrolled only 7% obtained credit or better in all their subjects.[1] It is thus clear that many students enter with very unrealistic academic expectations. Taking Australian universities as a whole only 37% of students graduate in minimum time[2] and it seems likely, although accurate data are very difficult to obtain, that this figure has been fairly stable over the past twenty years despite widespread public concern over high failure rates and many attempts to reduce them. The high drop-out rate[3] together with the widespread failure

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1 F. M. Katz et al. (1970) The Freshers of 1969: Characteristics and Performance. Sydney: Tertiary Education Research Centre, University of N.S.W.

2 The 1961 Study, op.cit.

3 K. Lewandowski et al. (1976) Academically Successful Students who did not Re-enrol at the University of N.S.W., 1975. R & D Paper No. 40. Sydney: Tertiary Education Research Centre, University of N.S.W.

to achieve graduation in minimum time, strongly suggests that many students are unable to make a psychologically smooth transition from school to university or to cope with the continuing demands of advanced study.[1]

For many students, the move from the familiar environment of high school to the very different milieu of a large university campus creates a great many problems which a large number of them find extremely difficult to overcome.[2] Many of them are totally bewildered by the sheer size of the University with its many thousands of students and staff and the impersonal, bureaucratic nature of its operations. Some are unable to maintain contact with relatives or friends and experience loneliness and isolation. Others are uncertain as to whether the course they have chosen is really appropriate to their often hazy intellectual and vocational interests. Many first-year classes are very large, sometimes containing over one thousand students, and contact with members of staff is usually very infrequent indeed compared with the close attention to which they were accustomed at high school.[3] They also have to adjust to the need to plan their study activities, acquire new study skills and take far more responsibility for their learning than was the case when they were at school.

The extent of these adjustment difficulties can be gauged from the fact that in 1974 some 2,427 students sought assistance from the University's Counselling Unit[4] and there were presumably many more in need of help but who chose not to seek it. A large number respond by quietly dropping-out during the year or by deciding not to re-enrol in the following year even though they have been

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1 J. M. Collins (1975) "Adjustment problems of first-year tertiary students." In D. E. Edgar, ed., The Sociology of Australian Education. Sydney: McGraw-Hill.

2 J. M. Genn (1971) School-to-University Transition as a Change of Environmental Press. University of Queensland Papers, Faculty of Education. Brisbane: University of Queensland Press.

3 J. P. Powell (1976) Informal Staff-Student Contact at the University of New South Wales. R & D Paper No. 42. Sydney: Tertiary Education Research Centre, University of N.S.W.

4 Student Counselling and Research Unit (1974) Annual Report 1974. Sydney: University of N.S.W.

academically successful. In 1975 there were about 1,000 in the latter category and an attempt was made to contact them in order to determine their reasons for deciding not to continue.[1] Of the 200 who responded, about half said that they had left because they were not satisfied with various aspects of University life and since about 50% of entering students in 1974 had claimed that they would put up with just about anything in order to obtain a degree it seems a reasonable assumption that many of those who continue are also unsatisfied but make the best they can of a bad job.

Given the weak motivation and uncertain intellectual interests and commitments of a large number of students the learning environment in which they are placed is obviously of crucial significance in helping them to discover where their true interests lie and in fostering the development of some semblance of genuine academic involvement. Unfortunately, however, the environment often militates against the growth of any genuine concern for scholarship or a lasting interest in the subjects being studied. Large classes, heavy reliance upon the lecture as the basic teaching technique, infrequent contacts with staff, shortages of books, the examination system, a heavy work-load in terms of frequent classes and assignments - all of these combine to foster the skills and attitudes associated with surviving the system rather than those connected with the disciplined exploration of the world of ideas. As one student remarked: "I find myself walking up the Basser Steps again, and where am I going? To another dull, silly class in a subject I am required to take."

What Can Be Done?

1. There is an urgent need to tackle the problem of providing more information to the high schools so that teachers are able to provide better advice and pupils are able to make more soundly-based decisions concerning choice of subject and institution. Students often

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1 Lewandowski, op.cit.

know remarkably little about the nature of the subject in which they find themselves enrolled in first year and are often very poorly informed about the social environment of the institution which they chose to enter. Teachers with the responsibility for advising high school pupils often lack adequate knowledge of the range of options which are available and inevitably sometimes give poor advice. As one commentator recently pointed out:

> Unfortunately, students are often unaware of the range of possibilities, and this is almost an inevitable consequence of the limited experience of the teachers in secondary schools who advise them. The likelihood of these teachers having had a university education, the rapid growth in the range of tertiary options and poor communication of these options to teachers have contributed to this.[1]

Among the steps which could usefully, and inexpensively, be taken to improve this situation are the following. The preparation and distribution to schools of more detailed information concerning career opportunities, entry requirements, pre-requisites, availability of bridging courses, and the structure of degree programmes. The British CRAC course guides,[2] which are up-dated every two years, provide an excellent model for an information source on the availability of particular courses. There is also a need for the provision of a series of booklets, written by experts, which explain to students the intellectual character and demands of particular subjects and the ways in which these are treated and taught in particular institutions: a model here would be the series published in Britain by Routledge and Kegan Paul.[3] Prospective students also

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[1] L. D. Mackay (1975) "Current developments relating to selection procedures for tertiary institutions." Victoria Institute of Colleges Newsletter, 9, No. 4, 22-24, p. 23.

[2] These are produced by the Careers Research and Advisory Centre, Bateman Street, Cambridge. Each guide is written by university or college teachers and gives full details of where the subject can be studied, differences between courses, transfer possibilities, entry requirements and selection procedures.

[3] For example: R. H. Graveson, ed. (1967) Law: An Outline for the Intending Student; R. J. Hirst, ed. (1968) Philosophy: An Outline for the Intending Student. For titles of other works of this nature see: J. P. Powell (1971) Universities and University Education: A select Bibliography. Vol.2: 1965-70. Windsor: National Foundation for Educational Research.

welcome accurate information on what life is really like at particular institutions.[1] Such guides are probably best prepared under the auspices of Students' Unions and universities should be prepared to encourage and support publications of this type.[2]

In addition to printed materials the schools should have readily available to them films and tape-slide material which can provide senior pupils, especially those in rural areas, with realistic information about university life and the work involved in studying within particular Faculties. Some Faculties are already taking steps to produce visual material of this type and funds should also be made available to support its production and dissemination. Teachers with responsibilities for advising pupils considering applying for entry to higher education also need assistance: it would be quite an easy matter to arrange for groups of teachers to attend briefing sessions arranged on a Faculty basis.

2. The evidence for the superior academic performance of mature-age students should encourage universities to greatly expand the proportion of their intake drawn from this source, and especially from among those members of the adult population who lack formal matriculation qualifications.[3] Such students are likely to adapt more readily to the demands of advanced study and be much less likely to fail or drop-out.[4]

3. A much larger number of school-leaver entrants should be encouraged to defer entry so that they can gain some work experience and

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[1] The only Australian publication of this type with which I am familiar is a book on Sydney University edited by R. A. de Fossard (1970) A University Perspective. Sydney: Wiley.

[2] Recent British guides of this type, prepared by students, include the following: D. Carter (1975) Manchester University: An Alternative Prospectus. Manchester: The Students Union, University of Manchester; V. Payne and Vivien Lipschitz (1975) The Alternative Prospectus of Universities and Polytechnics. London: Wildwood House, 1 Wardour Street, W.1.; Sheffield University Students Union (1976) Inside Out. Sheffield: The Students Union, University of Sheffield.

[3] E. Hopper and M. Osborn (1975) Adult Students: Education, Selection and Social Control. London: Francis Pinter.

[4] P. Walker (1975) "The University performance of mature students." Research in Education, No. 14, 1 - 13.

have the opportunity to clarify their confused ideas about what they really want to do with their lives.[1] There can be little doubt that many of those who decide to defer entry will find the world of work a more congenial and satisfying place than the campus and this is surely an excellent outcome. Our universities already have too many students whose academic and vocational commitment is so uncertain that their presence in large numbers seriously threatens the continued existence of the universities as centres of educational excellence. It can be scarcely said to be in the interests of young people to spend several years of their lives going through the motions of studying material in which they have only a marginal or non-existent interest.

> . . . there has been a tidal wave of students who do not regard attending the university as a privilege. Indeed it would be misleading to say they regard it as a right, rather it is not an option or a matter of choice at all. They are in the university because there is simply nowhere else to go.[2]

4. A major effort should be made to reduce the significance of H.S.C. results in the selection procedure. Not only does this impose unacceptable constraints upon the educational efforts of the schools but it is also responsible for many of the defects in the admission system. In particular, it creates a traumatic decision-making period for applicants in the few weeks prior to enrolment thus giving rise to hasty and ill-informed choices. As was suggested earlier, we are probably entering a period in which selection is rapidly becoming a non-issue because of the over-supply of places in a growing number of subject areas.

> Many writers are now questioning whether selection at the secondary-tertiary interface is any longer the main issue.... The excess supply is already evident in the engineering field and in some of the sciences in Victoria. Many faculties in tertiary institutions in Victoria are not engaged in competitive selection of qualified students. Indeed, with the exception of certain courses (e.g. in the medical and paramedical areas, and in the areas of Law and social work) a student can find a place in a tertiary course in the area he chooses, though not necessarily in the institution he chooses.[3]

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1 L. Orr (1974) A Year Between School and University. Windsor: National Foundation for Educational Research.

2 J. R. Searle (1972) The Campus War. Harmondsworth: Penguin Books, pp. 44-45.

3 Mackay, loc.cit.

5. The universities and colleges need to look much more critically and creatively at the nature of the educational experiences which they provide for students: this is their responsibility and the blame for any shortcomings ought not to be placed on the shoulders of the schools or the students themselves.[1] Incompetent teaching, inappropriate teaching methods, the inaccessibility of staff, overloaded and poorly constructed curricula, a de-humanized learning environment, the lack of any real sense of community - these all rapidly erode the idealism and feeling of excitement which most students bring with them when they enter a university for the first time. The tremendous expansion which has taken place within the higher education system within the past twenty years, and which has now come to a rather abrupt end, has created a range of educational problems which will demand a high degree of professional commitment and skill on the part of academics if they are to be resolved. A period of zero-growth in higher education is to be welcomed if it provides the opportunity to overcome these problems.

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[1] P. Chopra (1976) "The buck stops here." Vestes, 19, 47-51.

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